

**REMARKS**

Claim(s) 1-16 are pending in the application. Claim 10 stands rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Claims(s) 14-15 stand rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1, 9-16 stand rejected under 35 U.S.C. 102 (b) as being anticipated by “The design and implementation of a motion correction scheme for neurological PET, Bloomfield et al, 2003). Claim 2 stands rejected under 35 U.S.C. 103 (a) as being unpatentable over Bloomfield et al in view of Lee K.J. et al “Use of forward projection to correct patient motion during SPECT Imaging”. Claims 3-8 stand rejected under 35 U.S.C. 103 (a) as being unpatentable over Bloomfield et al in view of Nutt et al (US6,6630,284). The application has been amended. The claims have been amended. Claim 1 has been amended to more particularly point out and distinctly claim the present invention. Claims 4 and 5 have been cancelled. Applicants respectfully submit that none of the amendments constitute new matter in contravention of 35 U.S.C. §132. Reconsideration is respectfully requested.

Claim 10 stands rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Applicants respectfully submits that this rejection stands obviated by the amendment to claim 10 hereinabove. Applicants have amended claim 10 so that the image reconstruction is performed by one of the methods, not possibly by both. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims(s) 14-15 stand rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Applicants respectfully submit that this rejection stands obviated by the amendment to claim 14 hereinabove. Applicants have amended claim 14, in accordance with the Examiner’s suggestion, to

embody the software on a computer-readable medium. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 1, 9-16 stand rejected under 35 U.S.C. 102 (b) as being anticipated by "The design and implementation of a motion correction scheme for neurological PET, Bloomfield et al, 2003). This rejection is respectfully traversed.

Claim 1 has been amended to incorporate and expand the limitations of now-canceled claims 4 and 5. The independent claims now recite that the altering quantities step comprises either (a) selecting whether to scale an original detected quantity of the first detector data upwards or to replace the original detected quantity of the first detector data with a said calculated estimate, or (b) altering the original detected quantity of the first detector data so that the altered quantity takes into account both the original detected quantity and a the calculated estimate. Applicants respectfully submit that Bloomfield fails to disclose, teach, or suggest claim 1 as amended.

Moreover, Applicants respectfully submit that Nutt, while using scaling and thresholding, uses these methods for estimating attenuation correction factors for PET from a CT image. Therefore, the Nutt scaling and thresholding happen in the "image domain" and is completely unrelated to motion. In contrast, the present invention uses scaling and thresholding of detector data (usually called "sinogram domain" in PET and SPECT). Therefore, Nutt fails to correct the deficiencies of Bloomfield.

In view of the above, Applicants respectfully submit that neither Bloomfield nor Nutt, either alone or combined together, disclose, teach, or suggest the present invention. Reconsideration and withdrawal of the rejection are respectfully requested.

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Claim 2 stands rejected under 35 U.S.C. 103 (a) as being unpatentable over Bloomfield et al in view of Lee K.J. et al "Use of forward projection to correct patient motion during SPECT Imaging". Applicants respectfully submit that as claim 2 depends from allowable claim 1, it is axiomatic that claim 2 is allowable also. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 3-8 stand rejected under 35 U.S.C. 103 (a) as being unpatentable over Bloomfield et al in view of Nutt et al (US6,663,284). Applicants respectfully submit that as claims 3 and 6-8 depend from allowable claim 1, it is axiomatic that claims 3 and 6-8 are allowable also. Reconsideration and withdrawal of the rejection are respectfully requested.

In view of the amendments and remarks hereinabove, Applicants respectfully submit that the instant application, including claims 1-3 and 6-16, is in condition for allowance. Favorable action thereon is respectfully requested.

Any questions with respect to the foregoing may be directed to Applicants' undersigned counsel at the telephone number below.

Respectfully submitted,

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